



CRA Insights: Financial Markets

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Economic Issues in ETF Litigation

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Summary

Exchange Traded Funds (ETFs) are a relatively new financial product that has experienced significant growth in the last few years. Leveraged, inverse, and inverse leveraged ETFs—new ETF structures that have become available over the last several years—have recently become the target of regulatory investigations and litigation. This article provides an introduction to ETFs in the context of recent regulatory problems and litigation.

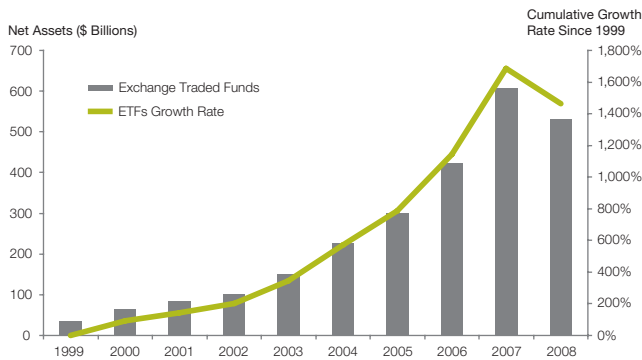
What are ETFs?

ETFs are investment vehicles; ETF shares represent fractional ownership in the underlying portfolio of the fund. Most ETFs in existence follow a passive investment strategy similar to index funds. As with passive mutual funds, ETFs hold an investment portfolio that mirrors the chosen index (e.g., the S&P 500 index or an international stock index). However, unlike open-end mutual funds, ETF shares are listed on a stock exchange and can be traded by investors like ordinary common stock. Consequently, new shares are not created when an investor invests in an ETF, and existing shares are not eliminated when an investor redeems his investment in the ETF.

The fact that shares in ETFs are traded on the stock exchange makes them similar in some ways to closed-end mutual funds. However, unlike closed-end mutual funds, new ETF shares can be created and existing shares can be redeemed through an in-kind contribution or distribution. This facility for the creation of new shares and the redemption of existing shares ensures that the market price of an ETF remains close to its net asset value.

ETF net assets have grown by 1,461 percent over the last 10 years. As of September 30, 2009, ETFs held \$693 billion in net assets (see Figure 1). The rate of growth of ETF assets has been several times the rate of growth of assets held by open- and closed-end mutual funds or unit investment trusts. Low management fees and relative tax efficiency are two important advantages that have contributed to the growth of ETFs. Because most existing ETFs follow a passive investment strategy, managing ETF assets is relatively inexpensive, and this leads to low management fees. Since investors' investments and redemptions do

Figure 1: ETF Total Net Assets and Cumulative Growth Rate 1999-2008

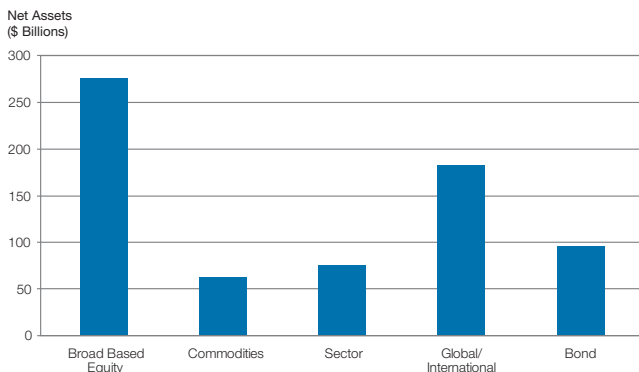


Notes and Sources: ETF data include investment companies not registered under the Investment Company Act of 1940 and exclude ETFs that primarily invest in other ETFs. Investment Company Institute.

not trigger flows of funds into or out of an ETF, an ETF trades less frequently than a similar open-end index fund. The lower volume of trading leads to lower costs and fees, and tax efficiency increases as the realization of taxable gains is avoided. Figure 2 reports the September 30, 2009, breakdown of ETF net assets by investment type. A large fraction of the assets, 40 percent, are held in broad-based US equity ETFs. Global/International equity ETFs, at 26 percent, account for the second largest group, and they are followed by bond ETFs, sector ETFs, and commodities ETFs.

Leveraged and inverse leveraged ETFs are recently introduced ETF structures. Approximately 108 leveraged ETFs currently exist; their combined net assets equal \$26.9 billion, including investments in all of the major types shown in Figure 2. As the name suggests, leveraged long ETFs use borrowed funds to amplify the return on a benchmark index. Examples of

Figure 2: Breakdown of ETF Total Net Assets as of September 30, 2009



Notes and Sources: Commodities ETFs are not registered under the Investment Company Act of 1940. Sector ETFs include funds both registered and not registered under the Investment Company Act of 1940. Investment Company Institute.

leveraged ETFs include the ProShares Ultra S&P 500, which is designed to return two times the return of the S&P 500 index. Approximately 51 leveraged long ETFs currently exist; their combined net assets equal \$12.4 billion.

Inverse (or short) ETFs are designed to increase in value as the benchmark index decreases in value. These ETFs represent a short position in the index. An example is the ProShares Short S&P 500 Fund, which is designed to increase 1.0 percent for every 1.0 percent decline in the S&P 500 Index. An inverse leveraged ETF is designed to return a negative multiple of the return on the benchmark index. These ETFs combine characteristics of leveraged ETFs and inverse ETFs. An example of an inverse leveraged ETF is the Direxion Daily Large Cap Bear 3x Shares ETF, which aims to provide negative three times the return of the Russell 1000 Index on any given day. Currently, about 57 inverse leveraged ETFs exist; their combined net assets equal \$14.5 billion.

Regulatory problems and litigation relating to leveraged ETFs

Leveraged and inverse leveraged ETFs have recently become the target of intense regulatory scrutiny and litigation. Regulators and plaintiffs have accused the ETFs of providing investors with potentially confusing and misleading information regarding the returns that an investment in these funds would experience.

The leveraged and inverse leveraged ETFs promise investors daily returns that are a multiple of the returns on the benchmark index. An investment, like a leveraged ETF, that delivers a multiple of the return on a benchmark index over one day will not deliver the multiple of the return on the benchmark index over a longer investment holding period, for example, a period of one month. Figure 3 contains an example which illustrates that the multi-day return on an ETF that delivers a multiple (2x) of the daily return of the underlying index will not be the same (2x) multiple of the multi-day return of the underlying index. This discrepancy occurs because the ETF resets its leverage to the target level every day in order to deliver a multiple of the underlying index return on a daily basis. On the other hand, to generate a multiple of the index return over a multi-day period, a “buy and hold return,” investors must

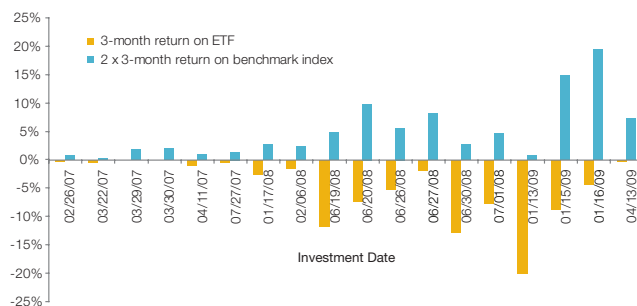
Figure 3: Divergence Between Leveraged ETF Return and Multiple of the Underlying Index Return

Day	Index Value	Index Return	2x Index Return	Value of \$100 Investment in 2x ETF
0	100.00			100.00
1	130.00	30%	60%	160.00
2	104.00	-20%	-40%	96.00
Cumulative Return	4.00%			-4.00%

hold the portfolio fixed. The divergence between the return on the ETF and a multiple of the return on the underlying index over a longer investment holding period can be quite large during periods of market volatility. Charles River Associates will further analyze this issue of ETF returns in a future publication.

The high volatility of markets from the second half of 2008 onwards has resulted in situations where investors in leveraged and inverse leveraged ETFs have lost money while the comparable multiple of the underlying index return over the period indicates a profitable investment. Figure 4 provides examples of instances where the 3-month returns to investors in a leveraged ETF promising twice the daily return on the underlying index diverged significantly from twice the return on underlying index. The horizontal axis in Figure 4 shows the starting date of a 3-month holding period for the investment. As Figure 4 illustrates, even though the benchmark index increased over the 3-month period following the date of investment, the ETF return was negative. This loss occurs regardless of the fact that the

Figure 4: Instances of a Leveraged Long ETF Generating Losses While Benchmark Index Generated Profits



Source: Bloomberg.

ETF returns two times the benchmark index return on a day-by-day basis. It is also noticeable that the discrepancy between the returns of the ETF and two times the return on the benchmark index increases significantly during the highly volatile period in late 2008 and early 2009.

Plaintiffs have filed multiple lawsuits claiming that the registration statements and prospectuses of leveraged ETFs misled investors and caused them to believe that the funds would deliver a multiple of the return on the underlying index over the investment period. Regulators are also examining the sufficiency of the information disclosed to investors and the suitability of leveraged ETFs for general stock market investors. Funds currently facing litigation are shown in Figure 5. These 12 funds have combined assets under management of \$10.1 billion. Charles River Associates will further analyze ETF litigation in a future issue of this publication.

Figure 5: Leveraged ETFs Currently in Litigation

Fund name	Ticker	Net Assets as of September 30, 2009 (\$ millions)
ProShares UltraShort S&P 500	SDS	3,444
ProShares Ultra Financials Fund	UYG	2,240
ProShares UltraShort Real Estate	SRS	830
ProShares UltraShort Financials	SKF	827
ProShares UltraShort Dow30	DXD	604
Direxion Daily Financial Bear 3X Shares	FAZ	591
ProShares Ultra Oil and Gas	DIG	481
ProShares UltraShort FTSE/Xinhua China 25	FXP	341
ProShares UltraShort Oil & Gas	DUG	329
ProShares UltraShort MSCI Emerging Markets	EEV	181
ProShares UltraShort Basic Materials	SMN	121
UltraShort DJ-AIG Crude Oil ProShares	SCO	84
Total		10,073

Notes and Sources:
 [1] Cases identified from ISSProxy.com.
 [2] Data on fund size from FT IDC.

About our Financial Markets Practice

CRA's Financial Markets Practice provides advanced consulting services to corporate clients and attorneys. We specialize in applying the tools, principles, and findings of finance, economics, and accounting to complex litigation and business problems. Companies, law firms, and government agencies rely on CRA for high quality research and analysis, expert testimony, and comprehensive support in litigation and regulatory proceedings. Our reputation is built on exceptional client service and our ability to present innovative and pragmatic solutions to complicated challenges.

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